ronment monitoring assembly in order to detect, for example, an object in the aircraft's environment that the passenger is currently looking or pointing at, and to then, for example, provide information about that object.

[0015] Accordingly, a passenger may demand information about things or objects he sees through the aircraft cabin window in a very easy, intuitive, and interactive manner. Thereby, the passenger's flight experience may be significantly improved.

[0016] According to an embodiment, the passenger monitoring assembly may be adapted for tracking a direction in which eyes of the passenger are directed.

[0017] In other words, using the passenger monitoring assembly, the interactive display system may analyze in which direction a passenger is currently looking through the aircraft window. Based on such information, the interactive display system may determine which object the passenger is currently observing through the cabin window and may then provide, for example, additional information about this object. Such eye-tracking enables very intuitive information provision to the passenger.

[0018] In this context, the term "direction" may include one or preferably both of an orientation into which the passenger's eyes are currently looking and a position of the passenger's head and specifically the passenger's eyes with respect to the aircraft cabin window through which he is currently looking.

[0019] According to an embodiment, the screen of the display assembly comprises a pressure sensitive matrix layer providing 2D information about a location pressed by a passenger and the passenger monitoring assembly is connected to the screen for receiving information from the pressure sensitive matrix layer.

[0020] In other words, the display assembly may be provided with a touch screen which may provide data signals indicating where a passenger has actually touched the screen, e.g., by pressing a position on the screen with one of his fingers. Using such touch screen, a passenger may point to a location within the aircraft cabin window at which he sees a specific object of interest and may thus intuitively demand further information about this object.

[0021] According to an embodiment, the screen comprised by the display assembly may be adapted such to enable switching to a transparent mode.

[0022] Such a screen may be implemented, on the one hand, to visualize information within the aircraft cabin window and, on the other hand, to provide at least a certain degree of transparency such that the passenger may still look through the aircraft cabin window and see the environment of the aircraft. For example, such screen may be provided using an LCD (liquid crystal display) having at least partially transparent electrodes and front and rear covers. Alternatively, semi-transparent OLED (organic light emitting diode) displays may be integrated into cabin windows.

[0023] According to an embodiment, the environment monitoring assembly may comprise at least one camera. Such camera may be attached to the aircraft and may be installed such as to be directed towards an outside environment of the aircraft. Preferably, two cameras are provided wherein each of the cameras may monitor one lateral side of the aircraft. The camera may be adapted to acquire, e.g., two-dimensional images or image sequences giving a representation of the environment outside the aircraft cabin window. Such images may be acquired at certain time intervals. For example, several images may be acquired per second, similarly to acquiring a movie. For example, the camera may include a photo detector such as a CCD (charge coupled device).

[0024] According to an embodiment, the proposed interactive aircraft cabin window display system may further comprise an output assembly adapted for outputting information to an external passenger end device (PED), such outputted information being provided by the information visualization assembly.

[0025] The output assembly may enable transmitting information from the information visualization assembly to an external passenger end device. Such passenger end device may be, for example, a mobile phone, a tablet computer, a laptop, etc. having preferably its own display and integrated memory for storing information, specifically visually displayable information.

[0026] Accordingly, using the display system's output assembly, a passenger may easily demand information about an object of interest outside the aircraft window and may then output such information to his own PED. Additionally, for example, further information such as an image provided by a camera included in the environment monitoring assembly may be transmitted to the PED, thereby enabling for example an easy way of taking pictures of an aircraft's environment using the passenger's end device.

[0027] The output assembly may be adapted for outputting information via wireless data transmission. Such wireless data transmission may be implemented using, e.g., WiFi, Bluetooth, or near-field-communication (NFC). Such wireless data transmission further improves easy and intuitive use of the proposed interactive display system.

[0028] According to a further embodiment, the display system is further adapted for receiving and displaying data from an in-flight entertainment system.

[0029] In one embodiment, the display assembly of the interactive display system may be used as an additional display in the aircraft cabin to be easily observed, for example, by a passenger sitting on a window seat such that conventional information contents such as movies may be displayed.

[0030] In addition to such conventional displaying options, interactive displaying options may be enabled using, for example, the passenger monitoring assembly for detecting a position at which a passenger is currently looking or pointing on a screen of the display assembly. Using such an option for easy and intuitive interactivity, a passenger may for example control the in-flight entertainment system and may, e.g., select information content provided by such IFE system or such option for interactivity may be used in playing computer games provided by the IFE system.

[0031] The proposed interactive aircraft cabin window display system may be installed in an aircraft.

[0032] Such aircraft may comprise, for example, a plurality of display assemblies, each being integrated into one of a plurality of aircraft cabin windows. The aircraft may further comprise a plurality of passenger monitoring assemblies, each being installed in an aircraft cabin such as to monitor actions of a passenger sitting next to one of the plurality of aircraft cabin windows. Finally, the aircraft may comprise at least two environment monitoring assemblies, wherein each one of these environment monitoring assemblies is installed such as to acquire a representation of an environment of the aircraft at one of both sides of the aircraft.

It is noted that possible features and advantages of embodiments of the present disclosure are described herein with